MODIS Technical Team Meeting
July 18, 2002
Building 33, Room E125

Vince Salomonson chaired the meeting. Present were Ed Masuoka, Bruce Ramsay, Robert Wolfe, Steve Kempler, Dorothy Hall, Shaida Johnston, Jack Xiong, Eric Vermote, and Wayne Esaias, with Yolanda Harvey taking the notes.

1.0 Upcoming Events

- MODIS Outreach Workshop on MODIS Vegetation Variables (VI/LAI/FPAR/NPP), July 15-19th 2002, University of Montana, Missoula, MT
- MODIS Science Team Meeting, July 22-24, 2002, Greenbelt Marriott, MD
- Remote Sensing of the Earth's Environment from Terra, a workshop at the International Summer School on Atmospheric and Oceanic Sciences, August 25-30, 2002, L'Aquila Italy
- 34TH COSPAR Scientific Assembly, October 10-19, 2002, in Houston, TX, (abstract deadline past)
- MODIS Outreach Workshop on Land Surface Radiation Products, October 24-25, 2002, Boston

2.0 Meeting Minutes

2.1 General Discussion

Salomonson called the meeting to order by saying that there will be a Tea and Posters Session on September 24th that will feature MODIS posters and will be held in Building 28. He already has one poster lined up for the session, but invited each of the disciplines to submit posters of their own to show all of MODIS' aspects in better detail. Esaias, Wolfe, Xiong, and Hall all said that they would be able to have posters put together for the session.

Salomonson showed a draft of the Aqua first light poster and credited its creation to Jacques Descloitres, Brandon Maccherone, and Yolanda Harvey. Salomonson pointed out aspects of the poster that he thought were particularly good – details of the first light image, the design scheme, and its aesthetic qualities. He continued that he hopes to add inset images on the main image that would show products from the different disciplines.

Salomonson said that he got comments from Mark Schoeberl about user experiences with MODIS data. Mark suggested that the MODIS disciplines create a site featuring "popular granules," but Salomonson said he is waiting for Dr. Schoeberl's reaction to the MODIS data set on CD and the ftp-site. Esaias said in response that his team has gone to a lot of trouble creating customizable products so that users have good experiences, and Masuoka said that with future reprocessing campaigns we will have the opportunity to make changes to satisfy the user community. Salomonson said that he doesn't want to undertake an effort that will undercut the DAACs; rather he wants to work *with* them to accomplish this. Esaias said that he would be willing to work with the DAACs to create an Oceans "bundle" containing the most popular products, and Kempler said that it is possible already. Kempler said that he had a person order data from scratch, and then

showed him the data tools, which the user really liked. Johnston said that these tools are making all the difference in the world to the users; to be walked through getting and using the data really makes the experience more positive for them. Salomonson suggested creating a QuickTime movie to show people how to order the data, and Johnston pointed out that the trouble is getting the users *to* the tools. Esaias said that he is intrigued with the results of the Land Outreach Workshops, and he knows from personal experience as well that the personal touch makes all the difference in how positive experiences with the data will be. He suggested a web cast that would allow users to be at their computers while they went through the tutorial. Wolfe mentioned that he was at a workshop where they did that with 135 people and was very successful. Kempler said that he had the same experience at IGARRS, and he also wrote a white paper about it. He said that many people's problems were in making the effort to switch to MODIS data and the attendant ordering process, which has a steep learning curve.

Salomonson showed the agenda for the upcoming Science Team Meeting. He said that Sara Graves will have a separate room and will be featuring the subsetting tools and other tools developed at the University of Alabama at Huntsville (UAH). There will be a panel discussion at the end of the meeting on the third day with general discussion afterwards. Johnston asked how much user services people at the DAACs are willing to do handholding, because she thinks people will try on their own first rather than ask for help right away. Kempler replied that he has people whose job is to do just that, and that's what the booths are about. Salomonson encouraged them to keep the effort up because it is so important. Salomonson mentioned that he has heard via Chris Justice that there are colleagues from Australia who are thrilled with the MODIS data, and Kempler said that he ran into similar people. Johnston mentioned that people aren't going to know about the quality flags and what to do with them, so that's the next step in the process.

Salomonson announced that Johnston has created a form (Product Change Request) for sending in software changes that will help smooth out the whole process. She will send it out via email, and may eventually post it to the MODIS website.

Harvey reported that the Aqua press release is done and waiting to be released by PAO. She said that she thinks it will go out on August 9th.

2.1 Instrument Status

2.1.1 Terra MODIS

Xiong reported that everything is stable and that nothing unusual is happening with the science data. The formatting errors are still rising, but slowly. Today the rate was up to 33 million errors per day, and they are slowly approaching the time when they will have to do something (at about 100 million errors per day they will switch to the B-side formatter).

2.1.2 Aqua MODIS

As for the Aqua MODIS instrument, all initial calibrations have been completed. A couple of weeks ago there was a spacecraft level safe hold. Xiong reported that detectors 1, 2, 3, 5, 6, 7, 8, 9, 15, and 19 are not working and that detector 11 came back. Detector

four is running much more smoothly, though some of the detectors are still not stable. They did a number of Solar Diffuser calibrations and are continuing to work on them. They may be able to make the data more consistent during reprocessing. He continued that there is no apparent pattern in the dead detectors. They did a yaw maneuver and a nighttime data collection, and he said that thermal band is pretty stable (with less than a one percent response change). Otherwise, he said, everything looks pretty good. The cold and warm mid-level plane misregistration will be discussed at the Science Team Meeting next week along with other instrument issues. Esaias said that he thinks they've done a very good job balancing the detectors.

2.2 DAAC

Kempler announced that there are about 715 terabytes of data in the GDAAC. Currently, they are paying the most attention to Oceans reprocessing. Kempler said that he is very happy with the way GDAAC has risen to the occasion on heavy processing loads, however the rate of product delivery to MODAPS and ingest of products produced by MODAPS is less than planned. There is a risk that MODAPS may run out of Level 1 products to process, but the GES DAAC is working on improving the distribution rate to MODAPS and believes they will have the problem solved shortly. Salomonson stated that the Oceans reprocessing must be finished by October.

Oceans reprocessing started June 16, and in just one month the DAAC has pushed a lot of data. Salomonson said that we should keep the pressure on to keep pushing hard. He is hoping that get to provisional/validated status faster than we did with Terra, but he doesn't want to begin reprocessing Aqua data before they finish reprocessing Terra data. Kempler said that it is amazing that the DAAC is reprocessing 8-9 days of Oceans data per day, and Esaias said that there are already 8 months done, which is even more amazing.

Masuoka said that while receiving data from the DAAC is one issue, there is also the problem of the DAAC ingest rate of Ocean products from MODAPS. While MODAPS can store the Ocean products it has produced, there is currently a 60-day backlog of data waiting for ingest at the GES DAAC. These products are on RAID disk but not all are backed up to tape. If files are lost due to disk problems then those days will need to be remade. Esaias suggested reducing the number of products so as to improve the ingest rate at the GES DAAC and thereby reduce the risk of products being lost. He said MODIS Oceans will need to make that decision fairly soon. Masuoka said that Bob Woodward of SDST is still testing the reduced volume PGEs and until these are ready we can't go to the reduced volume scenario selected by the Oceans Team.

2.3 SDST

Masuoka said that Nazmi Saleous is in Lebanon at the moment, so he is wondering who is working on the poster of images Salomonson had requested on behalf of Mark Schoeberl in Saleous' absence. Eric Vermote said he will contact Nazmi about what is needed to complete the poster.

Esaias wanted to relax the requirements for waiting for complete data days of Level 1 products on Aqua so that the Level 2 and higher products can be made more quickly for the disciplines. While this will result in incomplete days being sent to the GES DAAC, it will have the advantage of products being made available to the Science Team quickly rather than waiting several weeks for days to be closed when all the necessary files arrive. It was agreed that MODAPS can go ahead and close a data day for Aqua if 85% or more of the data are present.

2.4 NOAA

Ramsay said that he is ready to give his presentation on Tuesday (called "NOAA's Plans for MODIS Near Real Time Data") at the MODIS Science Team Meeting, and indicated that momentum is building for operational use of MODIS data in NOAA. NOAA has operational products in ocean color and wildfires. He plans on emphasizing operational MODIS products in this presentation next week. High volume flow of NRT MODIS data from the NOAA/NESDIS MODIS processing system at GSFC is dependent upon the installation of the high-speed data line to NOAA in Suitland and Camp Springs, Maryland, in the fall of 2002.

3.0 Action Items

3.1 New Action Items

None.

3.2 Action Items Carried Forward

3.2.1 Technical team to discuss further the issue of predicted ephemeris data and how to improve it.
Status: Open.
Ed Masuoka and Robert Wolfe plan to meet with the Terra Flight Operations Team to see if they can run definitive ephemeris 2-4 times per day. The context for this issue to provide better geolocation information for things like fire front tracking and similar issues.

3.2.2 The procedure for releasing Aqua MODIS products needs to be further refined via Discipline discussions and coordination with the Science Team leader, et al.
Status: Open.